DOCUMENT RESUME

ED 283 408 HE 020 044

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TITLE Assessment in American Higher Education: An Historical Perspective.
PUB DATE Jul 86
NOTE 23p.; Paper presented at the Conference on Assessment in Higher Education (St. Paul, MN, June 30-July 1, 1986). Paper collected as part of the American Association for Higher Education Assessment Forum.
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Curriculum Evaluation; *Educational Assessment; Educational History; *Higher Education; *Institutional Evaluation; Institutional Research; *Outcomes of Education; School Effectiveness; *Student Evaluation
IDENTIFIERS *AAHE Assessment Forum

ABSTRACT

The history of assessment in American higher education is examined, with a focus on the period after World War II. Assessment practices in the early years of higher education are also discussed. Assessment studies concentrated on either the college, the curriculum, or students. Questions that have been investigated by specific assessment studies are identified. The studies investigated the following concerns: whether the curriculum should be changed, the effectiveness of the curriculum, who should go to college, how students change during college, the value of a college education, the nature of the student experience, outcomes of a college education, what is wrong with the collegiate system, causes of campus unrest, and how to improve higher education. Within higher education today, assessment has come to have both narrow and broad connotations. The narrow connotation refers to determining the outcomes of a college education using standardized tests. The broad definition encompasses many types of measures and methods used to assess students at several points in time, from entrance to exit time. The following terms in contemporary use are briefly defined: test, measurement, evaluation, and assessment. A 45-item reference list concludes the document. (SW)

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Assessment in American Higher Education: An Historical Perspective

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Prepared for the Conference on Assessment in Higher Education, Earle Brown Center, University of Minnesota, St. Paul, June 30-July 1, 1986.

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ASSESSMENT IN AMERICAN HIGHER EDUCATION:
AN HISTORICAL PERSPECTIVE

"Does the outcome (of a college education) bear the impress of a clear, consistent and valid purpose? Does the thing prove as education to have been worth while?" (Flexner, 1908)

"How and to what exent (is) a student's mind changed by contact with an educational program." (Haggerty, 1937)

"Is college worth while? Are colleges really training people both to live and to make a living?... How much do colleges teach and students learn that sticks by them in adult life? That is useful and important? That fades away? That might have been replaced with better teaching, better materials?" (Pace, 1941)

Questions similar to these are being asked today, as they have been asked before, to instigate assessments regarding different aspects of the college experience. Students, colleges, and technology have changed, but the questions have not.

What can we gain by examining the history of assessment in higher education? The major reason is to improve the quality of our thinking, to sharpen the questions being addressed. We can also borrow and improve on methods that have been developed and tried previously, providing us with a broader context for investigating questions and interpreting results. Since many of today's questions are not new, we can profit from examining the investigations of the past designed to answer these or similar questions, and we can learn from mistakes that have been made in these assessments. Finally, if we try to determine the impact of past studies, we may better prepare for and project the impact of studies begun today.

In this paper we will begin with a brief look at terminology in contemporary use. Although primary focus of the paper will be on the post World War II period, we will first take a backward look at assessment

practices in the early years of higher education. We will then examine studies organized according to particular questions that they have addressed: focused on either the college, the curriculum, or the students, as illustrated in Table 1. We provide this background as a perspective for consideration of contemporary issues.

Assessment Terminology

Assessment is the word everyone is using these days. In the past, other terms have been used (e.g. testing, examining). However, assessment is not a new concept or practice: assessment tools and methods have been used for many years to answer questions like those posed above, about students, programs, and institutions.

Before looking at how assessment procedures have been used to answer questions such as those posed earlier, we first need to define this and other terms that are often used in this context: test, measurement, and evaluation. Mehrens and Lehmann(1984) have provided the following distinctions:

1. Test is the narrowest of the terms, defined as the presentation of a standard set of questions to be answered.
2. Measurement often connotes a broader concept than tests: we can measure characteristics in ways other than by giving tests (e.g. using observations, rating scales, etc.). Measurement can refer to both the score obtained and the process used.
3. Evaluation is often defined as the determination of the congruence between performance and objectives, and connotes a professional judgment or the process that allows one to make such a judgment about the desirability or value of something.
4. Assessment can refer to the diagnosis of an individual's problems, or

can be used broadly as a synonym for evaluation.

Some of these definitions have changed over the years. Assessment is now often used interchangeably with evaluation, measurement, or testing. However, assessment has come to be the preferred term, with respect to education in general and postsecondary education in particular. Until recently, assessment often had a legal or business connotation, having to do with objective appraisal, and did not appear in indices of education books or as a key word in the ERIC system relating to measurement and evaluation. This connotation may be due the word's Latin derivation from a word meaning "to sit beside" or "assist in the office of the judge" (Hartle, 1985), which refers to the process of gathering data and assembling evidence, so that judgements of value can be made by someone else. The seeming objectivity of the data gathered along with the separation of data collection from value judgements appear to be the basis for the preferred usage of this term.

Assessment practices in the early years of American Higher Education

Whether or not the term was used, assessment has been part of American Higher education since the founding of the first college (Harvard) in 1636. At that time and during the next century, colleges were modeled after those of Cambridge and Oxford. They had quite limited missions in preparing men for the clergy and/or public service. The entrance requirements for college, which were assessed by oral recitations, were knowledge of Greek and Latin literature and languages. There was a common expectation as to what students were supposed to gain from a college education through a common curriculum in classical languages, literature, and mathematics. There were also common examinations, in which all students were examined in the same way on the same topics (Harris, 1986). The examinations were public events where officials

such as the governor came to hear the recitations and to celebrate what the students had achieved. Students were ranked publicly at graduation, and it was not until 1828 (Rudolph, 1962) that this ranking was based on achievement alone, and was not heavily weighted by judgments of "character."

The other major form of assessment in the early colleges, which occured both during the year and at commencement, was disputations. Two students were assigned a thesis (a statement of universal truth) to argue, proving through deduction the validity of the thesis. An example of a thesis from 1769 was "Human reason alone does not suffice to explain how the true religion was introduced and built up so firmly in the world," (Rudolph, 1962). Rudolph noted the commencement disputations used as an examination of what students had learned during four years served "to put on display not only the senior class but the truths they had been taught," (p. 30).

Changes in American Higher Education

Colleges changed dramatically during the 1800's, especially in the last half of the century. With a rapid increase and interest in scientific information, teaching became more specialized. Lectures began to replace written materials. As the curriculum began to change and expand, there was soon little agreement as to what courses comprised a college education. Citing a need for variety, and not uniformity of educational products, Eliot introduced the elective system at Harvard in 1869 (Rudolph, 1962).

Along with the college curricula, the types of colleges had also changed. In 1824 the first technical school was set up, and by the mid-1800's there was a push to establish land-grant colleges for "the democracy," (Brubacher & Rudy, 1976). Following the establishment of female seminaries in 1826 and 1828, the first women's colleges were founded in the South in 1836 and 1838, and Oberlin College inaugurated coeducation in 1837. The first

Black colleges were founded in 1849 and 1851 (Brubacher & Rudy, 1976).

By the early 1900's there were more technical colleges, land-grant colleges, and more women and Blacks enrolled in higher education programs. The Carnegie Commission reported that during this time the proportion of the college-age population enrolled in college grew from less than 1 percent in 1870, to 4 percent in 1900, to 20 percent of whites and 10 percent of nonwhites in 1935 (Withey, 1971).

During this time of change, people were already looking at what was wrong with the colleges. As early as 1827, inquiries began at Yale concerning reform of the college curriculum, culminating in the Yale Report of ~~1928.~~ 1828 This report led to a full-scale inquiry into the nature of higher education in America (Rudolph, 1962). Defending the notion that the mind is a receptacle and a muscle waiting to be trained, the report gave a convincing argument to keep colleges as they were. Because of the long reaching effects of this report, the American college curriculum remained almost unchanged until after the Civil War.

In contrast to the resistance to reform at Yale, the president of Brown, Francis Wayland, presented a critique of the collegiate system and urged curricular reform (1842). His argument revolved around the costs of financing colleges. He criticized colleges for not meeting the needs of the public, and argued that in order to "induce men to pursue a collegiate course," the classical course of study should be changed. Then, more men would want to attend and pay for their college education, reducing the price of tuition and increasing available funds for salaries and buildings (Rudolph, 1962).

Although best known for his 1913 critique of medical education, Flexner had previously raised the question of "what's wrong with the colleges" in The American College: A Criticism, (1908). His "assessment" was based on his own experiences as headmaster of a preparatory school, as well as on visits to

several colleges, conversations with teachers at all types of schools, and comparisons with European universities. He analyzed the educational process from the preparation of students in secondary school to the completion of a baccalaureate degree, and questioned whether this process was worthwhile. Flexner believed that standards were not high enough and that the college curriculum was "chaotic." He recommended a "way out," through reassertion of the priority of colleges on undergraduate, rather than graduate education.

Assessment Since World War II

In order to look at the role of assessment in American higher education, we have chosen to focus on the more recent period which followed World War II. The most dramatic changes have occurred in postsecondary education in the period since World War II, with respect to the numbers and types of students. Begining with the returning war veterans, people of increasingly diverse abilitities and preparation began to attend college. Where colleges once controlled the quality of their graduates by the people they admitted and used to be defined by the skills people needed before they were admitted, now procedures changed dramatically as students with diverse skills were being admitted to open admissions colleges.

Rather than give a chronological listing of assessment studies and activities, we have chosen to organize major assessment studies according to the questions used to instigate the assessment, highlighting some of the "landmark" studies as shown in Table 1. These questions focus on the curriculum, the students, or the colleges.

Questions about the Curriculum

Perhaps the most interesting studies are those that involved the curriculum and the achievement of the goals of a general education. These

for competence in the general field of knowlege, and to place students in an easier relationship with their instructor. There was also the belief, as Harris has phrased it, that "someone other than the cook should taste the pudding" (Harris, 1986). However, this procedure led to undue reliance on multiple-choice, machine graded examns, rather than essays, and was eventually abandoned.

When Basic College of Michigan State University was created in the 1940, an examiner's office headed by Paul Dressel, was established to work with faculty in preparing examinations for Basic College courses, (Pace, 1984). The comprehensive exams that evolved at this college covered courses that required "three terms of work," required two sessions of two hours each, covered a wide range of abilities (rather than recall of factual knowlege) and included material from general areas not actually included in course materials. There were several purposes to this testing program, including:

1. To recognize individual differences in students and to allow them to progress at varying rates in accordance with these differences.
2. To encourage the retention and integration of knowledge accumulated over a period of three terms.
3. To place emphasis on objective evidence of achievement rather than on completion of a stereotyped sequence of activities.
4. To replace the varying and occasionally highly subjective judgements of many different instructors by one uniform system of grading all students.
5. To improve the quality of examinations by assigning the task of constructing examinations to interested and qualified individuals who are given adequate time for the job. (Dressel, 1949, p.8)

The separation of grading from instruction resulted in some negative

reactions, particularly for faculty who felt their prestige, power, and authority had been weakened and their credibility as graders questioned.

Questions about Students

Who should go to college?

Some of the earliest studies asked "who should go to college," "how should they be selected," and "what should colleges do for students?" These questions were addressed in the extensive study by Learned and Wood (1938). For almost a decade (beginning in 1915) these investigators studied the relations of higher and secondary education in the Pennsylvania, "with a view to finding out what education in school and college has done to certain individuals," (p.xi). The first part of the study presented information on college senior examinations (referred to as an academic inventory for the baccalaureate mind) and the second part deals with the background of students as they leave high school and proceed to college. The study is attributed as a landmark in the giving up the reliance on the system of Carnegie units of high school study which had been introduced in 1908 as a way of specifying admission requirements for college (Jessup, 1937). These authors criticized the idea of time spent instead of measuring what students knew on entering college. Instead, they argued that there should be less emphasis upon unit-credits and more emphasis on the attainments and growth of individual students.

Learned and Wood developed and administered subject area tests (such as "the physical world," "the social world," and "western civilization") to thousands of students, and extensively analyzed the results. In discussing their conclusions, the authors presented a plan for "schooling organized for self-education," which would require a new design in which "provision for the recognition of cumulative progress in knowlege measured comparably and

comprehensively" was strongly recommended. They encouraged gathering information to use in better understanding students as they enter, providing appropriate educational experiences, and flexible course offerings, and urged better connections between students and faculty, and colleges. Measurement of knowledge was stressed repeatedly as a means for recognizing progress. The authors described a failure to provide further education for high-school students who could profit by it, and recommended new answers to the question of who should go to college, how financial aid should be given, and who should teach.

The question of who should go to college was also addressed by the commission appointed by President Truman in 1946 to re-examine the American higher education system (President's Commission on Higher Education, 1947). In their report on defining the responsibilities of colleges and universities, they addressed the increasing numbers of Americans desiring higher education for themselves or their children. The commission proposed that every American should be "enabled and encouraged to carry his education, formal and informal, as far as his native capacities permit...No society can long remain free unless its members are freemen, and men are not free where ignorance prevails," (p.101). Consequently, the commission urged all barriers to educational opportutnity to be abolished immediately (Brubacher & Rudy, 1976). The commission projected that college enrollments would double, estimating that at least 49 percent of the population had the ability to complete 14 years of schooling, and at least 32 percent of the population had the ability to completed an advanced liberal or specialilzed profesional education. Free public education was to be extended to include two years of college, initiating the establishment of community colleges.

What is the nature of the student experience?

In addition to looking at the gains in knowledge and achievement of the desired outcomes of a general education, researcher also looked at the nature of the college experience and its effect on the personal, social, and intellectual development of students. The questions asked were: "what happens to students," "how do they change during college," and "how can we develop their potential?" Major investigators in this area have been Sanford (1966), Feldman and Newcomb (1969), and Astin (1977).

Sanford viewed colleges as institutions for human development, and studied the ways is which students develop and change during their college years. He reported on several studies done at Vassar college in the 1950's, and identified certain aspects of personality that were subject to change between freshman and senior years. Large numbers of female college freshmen had been interviewed as part of a series of Mellon Foundation studies at Vassar. Using interview data along with test scores and self-assessments, significant gains in development were found, and a scale was developed to measure these changes. Later, Sanford and Axelrod (1979) continued to address the problem of how students change in college. They described the diversity of students, and urged for a better fit between students and institutions. They showed how the question of "who should go to college" which had been studied earlier, changed to "who should go where and for what", and cited extensive studies at the University of California, Berkeley on the different characteristics of institutions and students at particular institutions.

In Four Critical Years, Astin (1977) analyzed data from the largest nationwide study of student development ever undertaken. He used data from over 200,000 students and 300 institutions, collected over ten years by the Cooperative Institutional Research Program (CIRP) of the American Council on Education. Over 80 outcomes were measured, including attitudes, values, aspirations, persistence, and achievement. Astin studied the affect on these

outcomes of attendence at different types of colleges, along with student maturation and development. In his conclusions he offered several recommendations for policy and practice, such as striving to get students more involved, finding ways to minimize the number of low grades given (such as moving to a criterion rather than a normative grading system, due to the negative impact of receiving low grades on student motivation), and following recommendations to reduce attrition.

What are the outcomes of a college education

One of the first people to question the value of a college education was Pace in his study of 951 alumni of the University of Minnesota (1941). Because of the greater numbers and greater diversity of students attending college, Pace addressed the problem of whether or not people were benefitting from the kind of education that colleges offered. He tried to answer the question "is college worthwhile," by looking at what people are like after attending college. This question was also triggered by the greater numbers of students dropping out before completing a college degree.

Pace began by addressing common concerns at that time that education should be more effective, that higher education should be better organized, with less emphasis on specialization within colleges, and that new information on colleges and student characteristics should be utilized. In response, Pace decided to do a follow-up study of a cross-section of students who had entered the University of Minnesota from 1924 to 1929. It took more than a year to develop a questionnaire to be used that filled a fifty-two page booklet. More than a thousand questions were asked under four headings: earning a living, home and family life, socio-civic affairs, and personal life. The results of the study indicated that adults have by and large "failed to see their own lives and their contemporary world as parts of an integrated whole." (p. 125)

The author believes that serious implications have not yet been fully realized by college educators or generally provided for in the college curriculums. In other words, the results were dismaying, and caused the author to urge for a rethinnkng and restucturing of general education.

The question of the value of a college education was also addressed by Bowen (1977). He analyzed and integrated many different sources of data to investigate the question "Is higher education today worth the cost," and looked at the outcomes resulting from the entire system of American higher education. He examined impacts of higher education on its students as individuals, looking at emotional and moral development, growth in practical competence, and views of students and alumni about the value of their education. Bowen concluded that the personal development and life enrichment exceeded the monetary benefits of a college education and that "American higher education is well worth what it costs," (p.449)

What's Wrong with the Colleges

The question of "what's wrong with the colleges" arose again in the 1960's, but in the context of campus unrest and student activism. One major investigation looked the true extent of campus unrest at 427 institutions across the country (Bayer & Astin, 1969). They surveyed representatives at these institutions, and concluded that popular accounts of the "crisis" at colleges was misleading, that colleges were responding to student protest in a meaningful way, that these institutions were not in fact "coming apart at the seams," and that dissent and protest were not likely to go away in the near future. The results of this study, conducted by the American Council on Education (ACE) were further analyzed in The Power of Protest, (Astin, Astin, Bayer, & Bisonti; 1975). These authors also analyzed longitudinal survey data, population trends over time, personal interviews, and case studies. They

were able to theorize as to causes of the rise of student protest in the late 1960's and 1970's, and also forcasted its decline.

In the 1980's, the question "what's wrong with college" has again surfaced. Three major reports were produced in 1984 and 1985. The first, Involvement in Learning (Study Group on the Conditions of Excellence in American Higher Education, 1984), cited a series of warning signals indicating that the quality of undergraduate education had declined. Recommendations were given based on three conditions of excellence: student involvement, high expectations, and assessment and feedback. In To Reclaim a Legacy, Bennett (1984) claimed that few college graduates receive adequate education in Western culture and civilization, and that graduates are shortchanged in the humanities. Chiding colleges for losing a clear sense of the purpose of education, Bennett offers recommendations to improve the stature of humanities in higher education. The third report, Integrity in the College Curriculum, charged that the bachelor's degree has become virtually meaningless, and urged college and university faculty members to take the lead in restoring "coherence" to the curriculum.

One response to the questions raised was offered by Derek Bok, President of Harvard, who addressed the concerns presented in the three reports (1986). Like Flexner, he first compared the American system of higher education to its counterparts in other countries. Bok concluded that the American system has the advantage of being competitive, decentralized, and consequently, adaptable. Citing the reports urging for reform, he urged professors to formulate common goals and to work together to achieve them, and to determine student progress toward these goals. The difficulty of measuring many broad educational goals wasacknowledged, but Bok insisted that it is essential and that more sophisticated measures be developed and used. He concluded:

> Skeptics will reply that education is an inscrutable process and that the methods of the social sciences are too fallible to enable these efforts to proceed very far. Such statements have a self-fulfilling quality. To believe them is to deprive ourselves of the chance ever to proceed by an intelligent process of trial and error to improve the quality of teaching and learning (p. 64).

Related Areas of Study

Although we have already left the past in discussing these more recent studies, a study of the history of assessment turns up many more interesting studies and questions than can be included in this brief paper. Today's assessment activities have been greatly influenced by the development of several different areas: psychological testing, the establishment of the educational evaluation and institutional research professions, and of course by the rapidly changing field of computer technology. It is useful to look at these areas separately as they relate to events and practices in higher education.For a more complete investigation, readers are referred to Resnick (1982, 1986) for a history of testing in higher education, to Conrad and Wilson (1985) and Harcleroad (1980) for historical accounts of program evaluation in higher education, and to Peterson (1985) and Fincher (1985) for accounts of the development of institutional research. There are many other questions, studies, and researchers not discussed in this paper. However, it is now time to turn to the role of assessment in higher education today.

The Present Status of Assessment in Higher Education

Within higher education today, assessment has come to have both narrow and broad connotations. The narrow connotation refers to determining the outcomes of a college education using standardized tests such as the ACT-COMP

or GRE exams. The broad definition encompasses many types of measures and methods, used to assess students at several points in time, from the time they enter to the time they exit from an institution. The term is applied both to individual students and to cohorts of students, as well as to programs and institutions. In the paper prepared for the American Association of Higher Education (AAHE) conference on assessment in higher education, Hartle (1985) distinguished between six separate but overlapping assessment activities. These are:

1. Using multiple measures and observers to track student's intellectual and personal growth over an extended period of time.
2. State-mandated requirements for evaluating students and/or academic programs.
3. A shorthand way of focusing on the "value added" by postsecondary education (using pre and post-tests to measure the gains in general education and skills).
4. General standardized testing (e.g. ETS and ACT).
5. A way of making decisions about funding by rewarding institutions for performance on established criteria.
6. Measuring changes in student attitudes and values.

It is entirely possible that the same types of data may be gathered and used for more than one of these activities. Two excellent sources of information on testing services and exemplary assessment programs at different institutions are Ewell (1984) and Harris (1985).

As mentioned earlier, in the report of the Study Group on the Conditions of Excellence in American Higher Education, Involvement in Learning (1984), assessment and feedback is listed as one of three conditions of excellence.

The recommendation is made that assessment and feedback should be regular and periodic, and should be used to improve learning and increase student involvement. Institutions are charged with not only stating their expectations and standards but for assessing the degree to which those ends have been met. The authors state:

> We believe that assessment can be used to increase student involvement and to clarify expectations if it is designed to measure improvements in performance, and if the information so gathered is fed back to students, faculty, and administrators as the basis for making changes in individual effort, program content, and instructional methods (p.22).

Our review of history demonstrates that educators and researchers for many years have been concerned with assessment issues. It is now our job to become better informed and to learn what we can from the past, in our quest for answers to today's questions.

Table 1

Assessment Questions in American Higher Education

	Questions	Source
urriculum	Should the curriculum be changed?	Yale Report (1928) in Hofstadter (1961) Wayland (1842)
	How effective is the curriculum?	Committee on Educational Research, University of Minnesota, (1937, 1941) Eckert (1943) Executive Committee of the Cooperative Study in General Education (1947) Dressel (1949) Bloom (1950)
tudents	Who should go to college?	Learned & Wood (1938) President's Commission on Higher Education (1947)
	What are the outcomes of a college education?	Pace (1941) Eckert (1943)
	How do students change during college?	Sanford (1962, 1966) Feldman & Newcomb (1969) Astin (1977)
	What is the value of a college education?	Bowen (1977)
	What is the nature of the student's experience?	Pace (1983)
ollege	What's wrong with the collegiate system?	Flexner (1908)
	What's causing campus unrest?	Bayer & Astin (1969) Astin, Astin, Bayer, & Bisconti (1969)
	How should higher education be improved?	Bennett (1984) Study Group on Conditions of Excellence (1984) Association of American Colleges (1985)

REFERENCES

Association of American Colleges, (1985). Integrity in the college curriculum. Report of the Project on Redefining the Meaning and Purpose of Baccalaureate Degrees, Washington, DC.

Astin, A.W. (1977). Four critical years. San Francisco: Jossey-Bass.

Astin, A.W., Astin, H.S., Bayer, A.E., & Bisconti, A.S. (1975). The power of protest. San Francisco: Jossey-Bass.

Bayer, A.E. & Astin, A.W. (1969). Campus disruption during 1968-1969. American Council on Education Research Report, 4, (3).

Bell, D. (1966). The reform of general education. New York: Columbia University Press.

Bennett, W.J. (1984). To reclaim a legacy. Report of the National Endowment of the Humanities, Washington, DC.

Bloom,B. (1950). The idea and practice of general education. Chicago: University of Chicago Press.

Bok, D. (1986). Toward education of quality. Harvard magazine. May-June, 49-64.

Bowen, H.R. (1977). Investment in learning. San Francisco: Jossey-Bass.

Brubacher, J.S. & Rudy, W.C. (1976). Higher education in transition. New York: Harper & Row.

Committee on Educational Research. (1941). Studies in college examinations. Minneapolis: University of Minnesota.

Committee on Educational Research. (1937). The effective general college curriculum as revealed by examinations. Minneapolis: University of Minnesota Press.

Conrad, C.F. & Wilson, R.F. (1985). Academic program reviews. ASHE-ERIC Report # 5.

Dressel, P. (1949). Comprehensive evaminations in a program of general education. East Lansing: Michigan State College Press.

Dressel, P. (Ed.). (1954). Evaluation in general education. East Lansing:Michigan State College Press

Dressel, P., & Mayhew, L. (1954). General education: Explorations in evaluation. Washington, DC:American Council on Education.

Eckert, R. (1943). Outcomes of general education. Minneapolis: University of Minnesota Press.

Ewell, P. (1984) The self-regarding institution. National Center for Higher

Educational Management Systems, Boulder, CO.

Executive Committee of the Cooperative Study in General Education. (1947). Cooperation in general education. Washington, DC: American council on Education.

Feldman, K.A. & Newcomb, T.M. (1969). The impact of college on students. San Francisco: Jossey-Bass.

Fincher,C. (1985). The art and science of institutional research. In M.W. Peterson & M. Corcoran (Eds.) Institutional Research in transition. San Francisco: Jossey-Bass,17-38.

Flexner,A. (1908). The American college. New York: Century Co.

Haggerty, M.E. (1937). The effective college curriculum. In The effective General College curriculum, Committee on Educational Research of the University of Minnesota, Minneapolis: University of Minnesota Press.

Harcleroad, F.F. (1980). The context of academic program evaluation. In E.C. Craven (Ed.) Academic Program Evaluation. New Directions for Institutional Research.

Harris, J. (1986). Assessment: knowing more about the outcomes of college (Cassette Recording No. AAHE-17). Washington DC: American Association of Higher Education.

Harris, J. (1985). Assessing outcomes in higher education: practical suggestions for getting started. Paper prepared for the American Association of Higher Education National Conference on Assessment, South Carolina.

Hartle, T. (1985). The growing interest in measuring the educational achievement of college students. Paper prepared for the American Association of Higher Education National Conference on Assessment, South Carolina.

Hofstadter, R.H. & Smith, W. (Eds.) (1961). American higher education: a documentary history, Vol. I. Chicago: University of Chicago Press.

Jessup, W.A. (1937). Foreword. The student and his knowledge. Carnegie foundation for the advancement of teaching: Bulletin 29, New York.

Learned, W.S. & Wood, B.D. (1938). The student and his knowledge. Carnegie foundation for the advancement of teaching: Bulletin 29, New York.

Mehrens, W.A. & Lehmann, I.J. (1984). Measurement and evaluation in education and psychology, 3rd edition. New York: Holt, Rhinehart and Winston.

Pace, C.R. (1941). They went to college. Minneapolis: University of Minnesota Press.

Pace, C.R. (1984). Historical perspectives on student outcomes: assessment with implications for the future. NASPA Journal. 22, (2), 10-18.

Pace, C.R. (1979). Measuring outcomes of college. San Francisco: Jossey-Bass.

Pace, C.R. (1983). College student experiences (2nd ed.). Los Angeles: Higher Education Research Institute, UCLA.

Peterson, M.W. (1985). Institutional research: an evolutionary perspective. In M.W. Peterson & M. Corcoran (Eds.) Institutional Research in Transition, San Francisco: Jossey-Bass, 5-16.

President's Commission on Higher Education. (1947). Higher education for American democracy. New York: Harper & Brothers.

Resnick, D.P. (1981). Testing in America: A supportive environment. Phi Delta Kappan. 62, 625-628.

Resnick, D.P. (1986). Testing and examinations in historical perspective. Presentation at the Conference on Testing and Quality Assurance in Higher Education, Miami.

Rudolph, F. (1962). The American college and university. New York: Random House.

Sanford, N. (1962). The American college. New York: John Wiley & Sons.

Sanford, N. (1966). Self and society. New York: Atheneum.

Sanford, N. & Axlerod. (1979) College and character. Berkeley, CA: Montaigne, Inc.

Study Group on the Conditions of Excellence in American Higher Education (1984). Involvement in learning: realizing the potential of American higher education. National Institute of Education, Washington, DC.

Wayland, F. (1842). Thoughts on the present collegiate system in the United States. Boston: Gould, Kendall and Lincoln.

Withey, S.B. (1971). A degree and what else? New York: McGraw-Hill.